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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/651,941	09/02/2003	Yuji Arai	12049-0010	1227

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WASHINGTON, DC 20006

EXAMINER

BOMAR, THOMAS S

ART UNIT	PAPER NUMBER
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3672

DATE MAILED: 03/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/651,941

Applicant(s)

ARAI ET AL.

Examiner

Shane Bomar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 2, 7, 8 and 10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-6, 9 and 11-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/2/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. This application contains claims directed to the following patentably distinct species of the claimed invention: Group I contains claims 1, 3-6, 9, and 11-13, wherein an expandable steel pipe is claimed that requires that the non-uniform wall thickness ratio satisfy a given expression. Group II contains claims 2, 7, 8, and 10, wherein an expandable steel pipe is claimed that requires an eccentric non-uniform wall thickness ration be less than 10%, with no expression to be satisfied.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, no claims are generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to

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be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

2. During a telephone conversation with Christopher Brody on 3/4/2005 a provisional election was made with traverse to prosecute the invention of Group I, claims 1, 3-6, 9, and 11-13. Affirmation of this election must be made by applicant in replying to this Office action. Claims 2, 7, 8, and 10 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

3. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Drawings

4. Figures 1-3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

5. The disclosure is objected to because of the following informalities: the recitation of “lowing” near the middle of page 3 should be --lowering--; in the heading at the bottom of page 28, the recitation of “Indutrial” should be --Industrial--.

Appropriate correction is required.

Claim Objections

6. Claims 6 and 11-13 are objected to because of the following informalities: in each of these claims, the first method step should start with --embedding the steel pipe-- so that it is known that the pipe of claim 1 is being claimed and not a new pipe. Accordingly, recitations of additional pipes should be labeled clearly so that one pipe is clearly distinguished from another. For example, in the third method step of each claim, “inserting a steel pipe” should be changed to --inserting a second steel pipe--, and instead of “inserting another steel pipe”, the recitation of --inserting a third steel pipe-- should be used in the sixth step. Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claims 1, 3-6, 9, and 11-13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not

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described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. It is unclear from the specification how the claimed invention could be used because the non-uniform wall thickness ratio E_0 has not been defined as it is in the description, for example on page 5. Furthermore, it is stated that the pipe expansion ratio is a percentage. If this is true, shouldn't the true decimal form of the percentage be substituted into expression 1 for the pipe expansion ratio? For example, if the pipe expansion ratio is 10%, then 0.1 should be plugged into the equation. If this logic is used for the first example given in applicant's Table 2, then 29.95 is obtained instead of the listed 25.4. To further clarify the examiner's point on this matter, again using the first example of table 2, if the whole number 10% is multiplied by 0.018, then 0.18% is obtained. It is unclear how, then, the whole number 1 can be added to the 0.18%. In other words, the whole number 1 added to 10% does not equal 11%, because 11% in decimal form is 0.11 and the decimal form of 10% added to 1 would yield 1.1.

There are also other problems to note for claim 1. The way that the expressions are currently labeled is confusing since periods are used in the middle of the claim, and not at the end as is required. The applicant is encouraged to review, as an example only, claims 3 and 4 of US patent 6,782,921 as an example of a better way for presenting expressions in a claim. Also, the recitation of "the non-uniform wall thickness" in the second line of the claim should be --a non-uniform wall thickness-- since this is a new concept in the claim. Lastly, brackets should not be used in expression 2 since brackets are commonly used to show matter that has been deleted from an amended claim. Therefore, it would be preferable to use parentheses instead.

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Claims 3-6, 9, and 11-13 also fail to comply with the enablement requirement since they depend, directly or indirectly, from claim 1.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

10. Claims 1, 3-5, and 9 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by US patent 6,532,995 to Asahi et al.

Asahi et al clearly anticipate the current claims because, without a clear definition of the term E0, then any steel pipe which could be expanded would necessarily satisfy the given expression since any positive number substituted for the pipe expansion ratio would give a number that is less than or equal to 30. See column 2, lines 12-58 where it is shown that the steel pipe is expandable and has the same claimed material components.

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11. Claims 1 and 6 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by US patent 4,483,399 to Colgate.

Colgate clearly anticipates the current claims because, without a clear definition of the term E0, then any steel pipe which could be expanded would necessarily satisfy the given expression since any positive number substituted for the pipe expansion ratio would give a number that is less than or equal to 30. See Figure 1-4 and claims 12-15 where it is shown that the steel pipe is expandable and is embedded in an oil well according to the currently claimed steps.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asahi et al in view of Colgate.

Asahi et al teach the steel pipe of claims 3-5 from above with the given material compositions. It is not taught that the steel pipe is embedded in an oil well according to the currently claimed steps of claims 11-13.

Colgate teaches a method of embedding oil well steel pipes having smaller diameters one after another (see Figs. 1-4 and claims 12-15). It would have been obvious to one of ordinary skill in the art, having the teachings of Asahi et al and Colgate before him at the time the

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invention was made, to modify the steel pipe taught by Asahi et al to be used in the method of Colgate, in order to obtain a method of embedding oil well pipes that uses super-high strength pipe, as taught by Asahi et al. One would have been motivated to make such a combination since Asahi et al have shown these types of pipes to be notoriously known in the art, and since Colgate does not give any specific requirements as to the type of pipe that can be employed in the method, wherein it would be obvious to one of ordinary skill in the art that the super-high strength pipe of Asahi et al would be beneficial in the harsh downhole environment of Colgate.

Conclusion

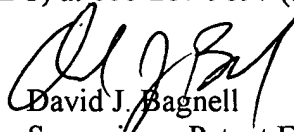
14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Gord et al, Olesen et al, Shimizu et al, Tsuru et al, Vrubl et al, and Yoshinaga et al teach pipes with variable wall thicknesses and other characteristics of interest. Cook et al, Metcalfe et al, and Simmons teach methods of casing while drilling boreholes with expandable pipes.


15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shane Bomar whose telephone number is 703-305-4849. The examiner can normally be reached on Monday - Thursday from 7:00am to 4:30pm. The examiner can also be reached on alternate Fridays. NOTE: After 03/31/2005, the examiner's telephone number will change to 571-272-7026.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on 703-308-2151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


David J. Bagnell
Supervisory Patent Examiner
Art Unit 3672


tsb
March 4, 2005